REMARKS

Applicant appreciates the Office Action of June 30, 2005. Applicant respectfully submits that the pending claims are patentable over the cited references for at least the reasons discussed herein. Accordingly, Applicant respectfully submits that the pending claims are in condition for allowance, which is respectfully requested in due course.

The Section 102 Rejection

Claim 35 stands rejected under 35 U.S.C. § 102(b) as being anticipated by United States Patent No, 6,034,807 to Little et. al (hereinafter "Little"). *See* Office Action, page 2. Under 35 U.S.C. § 102, "a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." M.P.E.P. § 2131 (quoting *Verdegaal Bros. v. Union Oil Co.*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987)). A finding of anticipation further requires that there must be no difference between the claimed invention and the disclosure of the cited reference as viewed by one of ordinary skill in the art. *See Scripps Clinic & Research Foundation v. Genentech Inc.*, 927 F.2d 1565, 1576, 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991). In particular, the Court of Appeals for the Federal Circuit held that a finding of anticipation requires absolute identity for each and every element set forth in the claimed invention. *See Trintec Indus. Inc. v. Top-U.S.A. Corp.*, 63 U.S.P.Q.2d 1597 (Fed. Cir. 2002). Thus, the Office Action states that Little identically teaches each and every element of Claim 35. Applicant respectfully disagrees.

In particular, Little discusses a *Bistable Paper White Direct View Display* as recited in the title. In contrast, Claim 35 recites "a dual mode **liquid crystal display** that operates in a purely transmissive mode or a purely reflective mode." Nothing in Little discloses or suggests a liquid crystal display. In fact, Little discusses the drawbacks of liquid crystal displays in the background of the invention. *See* Little, column 1, line53-64. Accordingly, Little does not disclose or suggest each and every element of the Claim 35. Thus, Applicant submits that Claim 35 is patentable over Little for at least these reasons.

The Section 103 Rejections

A. Independent Claim 1 is Patentable over the Cited References

Claims 1-4, 7 and 13-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over United States Patent No. 6,750,932 to Kim (hereinafter "Kim") in view of United Patent No. 6,556,334 to Lee (hereinafter "Lee") and Little. Applicant respectfully submits that many of the recitations of these claims are neither disclosed nor suggested by the cited references.

The Office Action points to the teachings of Kim and Little to provide the teachings of, for example, Claim 1 of the present application. *See* Office Action, page 3. The Office Action states:

> Kim teaches a traditional transflective liquid crystal display (see fig. 4), however, Kim fails to teaches micro-electromechanical reflective array; and a plurality of plates being moveable between first and second positions, the plates being configured to operate in a first mode of operation when the plurality of plates are in the first position and configured to operate in a second mode of operation when the plurality of plates are in the second position.

See Office Action, page 3. The Office Action points to Little as providing the missing teachings. *See* Office Action, page 3. Applicant respectfully submits that one of skill in the art would not be motivated to combine the cited references as suggested in the Office Action and, even if combined, the combination of Kim and Little would not disclose or suggest the recitations of Claim 1 for at least the reasons discussed herein.

In particular, as affirmed by the Court of Appeals for the Federal Circuit in *In re Sang-su Lee*, a factual question of motivation is material to patentability, **and cannot be resolved on subjective belief and unknown authority**. *See In re Sang-su Lee*, 277 F.3d 1338 (Fed. Cir. 2002). It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." *W.L. Gore v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 U.S.P.Q. 303, 312-13 (Fed. Cir. 1983).

The Office Action appears to point to yet another reference, Lee, as providing the missing motivation. The Office Action states:

> Lee teaches a micro-electromechanical mirror device for liquid crystal to improve efficiency in light utilization, and a reduced pixel size and reduced fabricating cost

> due to semiconductor processing techniques (see column 2 lines 46-60). Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to use a micro-electromechanical mirror device for a transflector in Baek's [sic] transflective display to improve efficiency in light utilization, reduce pixel size and reduce fabrication costs.

See Office Action, page 3. This motivation is, at most, a motivation based on "subjective belief and unknown authority," the type of motivation that was rejected by the Federal Circuit in *In re Sang-su Lee*. First of all, Lee discusses a micro-electromechanical device used as an optical switch device, not a micro-electromechanical reflective array as recited in Claim 1. *See* Lee, Abstract. Thus, the cited portion of Lee does not apply to a combination of Little and Kim. Thus, the Office Action does not point to any specific portion of the cited references that would induce one of skill in the art to combine the cited references as suggested in the Office Action. Accordingly, the statement in the Office Action with respect to motivation does not adequately address the issue of motivation to combine as discussed in *In re Sang-su Lee*. Thus, it appears that the Office Action gains its alleged impetus or suggestion to combine the cited references by hindsight reasoning informed by Applicants' disclosure, which, as noted above, is an inappropriate basis for combining references. The use of hindsight is made further apparent by the use of three references to teach the recitations of a single claim.

Furthermore, as discussed in the background of the present application:

> Currently, there are three types of LCDs: highly transmissive, highly reflective and transflective. A transmissive display is typically backlit by a light source, for example, a light emitting diode (LED) or an electroluminescent (EL) panel. Transmissive displays may operate well in poorly lit environments but may not function adequately in bright environments, for example, in brightly lit office environments or sunlight. A reflective device, on the other hand, is typically front lit by, for example, sunlight or office lighting. Reflective displays may operate well in brightly lit environments, but may not be as useful in a poorly lit environment. **A transflective display is a combination of a transmissive display and a reflective display. In particular, transmissive devices use a paired system where a moderate percentage of light is reflected and a moderate percentage of light is transmitted all the time.** As such, a transflective display may not operate as well as a reflective display when front lit in a bright environment and may not operate as well as a transmissive display when back lit in a poorly lit environment.

See Specification, page 1 (emphasis added). Thus, a transflective display is configured to reflect a moderate percentage of light and transmit a moderate percentage of light, so there

would be no need to modify the transflective display to include a micro-electromechanical reflective array that has first and second modes of operation as recited in Claim 1. Furthermore, even if combined, the combination would not teach a transflective array, *i.e.*, an array that is configured to reflect a moderate percentage of light and transmit a moderate percentage of light. Accordingly, there is no motivation to combine the cited references as suggested and even if combined, the combination does not teach the recitations of the claims.

Accordingly, Applicant respectfully submits that Independent Claim 1 is patentable over the cited combination for at least these reasons. Furthermore, the dependent claims are patentable at least per the patentability of independent base Claim 1 from which they depend.

B. Independent Claim 15 is patentable over the Cited References

Claims 8-12, 15, 16 and 22-25 stand rejected under 35 U.S.C. § 103(a) as being unpatenable over Kim, Lee and Little in view of United States Patent No. 6,762,741 to Weindorf (hereinafter "Weindorf"). Many of the recitations of these claims are neither disclosed nor suggested by the cited combination. For example, Claim 15 recites:

> A liquid crystal display comprising:
> a micro-electromechanical reflective array disposed in a liquid crystal display;
> a plurality of plates associated with the micro-electromechanical reflective array, the plates being movable between first and second positions, the first position being substantially parallel to the liquid crystal display and the second position being substantially normal to the liquid crystal display; and
> a sensor configured to sense ambient light and generate a control signal, the plurality of plates being configured to be in the first position when the control signal is asserted and configured to be in the second position when the control signal is not asserted.

The discussion of the first two recitations of Claim 15 is substantially identical to the rejection based on Kim, Little and Lee discussed above with respect to Claim 1. *See* Office Action, pages 6 and 7. Accordingly, Claim 15 is patentable over the cited combination for at least the reasons discussed above with respect to Claim 1.

With respect to the sensor as recited in Claim 15, the Office Action admits that none of Kim, Lee or Little disclose a sensor as recited in Claim 15. *See* Office Action, page 7. The Office Action points to, yet another reference, Weindorf to provide the missing teachings. *See* Office Action, page 7. Weindorf discusses an automatic brightness control system for display devices. *See* Weindorf, Abstract. As discussed above, there must be a motivation in

the references or generally available in the art to combine references. Nothing in Weindorf, Little, Lee or Kim provides a motivation for such a combination. It is clear that the four references cited against this single claim were selected using the Applicant's disclosure as a road map, which is clearly improper. Accordingly, Claim 15 is patentable over the cited combination for at least these additional reasons.

C. Independent Claim 26 is patentable over the Cited References

Claims 26-30 and 34 stands rejected under 35 U.S.C. § 103(a) as being unpatenable over Kim, Lee and Little in view of United States Patent No. 6,879,308 to Hsieh (hereinafter "Hsieh"). Many of the recitations of these claims are neither disclosed nor suggested by the cited combination. For example, Claim 26 recites:

> A device comprising:
> a housing;
> a liquid crystal display integrated with the housing, the liquid crystal display including a micro-electromechanical reflective array and a plurality of plates associated with the micro-electromechanical reflective array, the plates being movable between first and second positions, the plates being configured to operate in a first mode of operation when the plurality of plates are in the first position and configured to operate in a second mode of operation when the plurality of plates are in the second position.

The Office Action states that the combination of "Kim, Lee and Little disclose all the limitations of claim 26 (see claim 1 rejection), except for a housing to fit the liquid crystal display." *See* Office Action, page 10. Accordingly, Claim 26 is patentable over the cited combination for at least the reasons discussed above with respect to Claim 1.

The Office Action points to, yet another reference, Hsieh as providing the missing teachings. *See* Office Action, page 10. Hsieh discusses a housing for flat panel displays. *See* Hsieh, Abstract. As discussed above, there must be a motivation in the references or generally available in the art to combine references. Nothing in Hseih, Little, Lee or Kim provides a motivation for such a combination. It is clear that the four references cited against this single claim were selected using the Applicant's disclosure as a road map, which is clearly improper. Accordingly, Claim 26 is patentable over the cited combination for at least these additional reasons.

D. Many of the Dependent Claims are also independently Patentable

Claims 2-4, 7 and 13-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kim in view of Lee and Little. Claims 8-12, 16 and 22-25 stand rejected under 35 U.S.C. § 103(a) as being unpatenable over Kim, Lee and Little in view of Weindorf. Claims 27-30 and 34 stands rejected under 35 U.S.C. § 103(a) as being unpatenable over Kim, Lee and Little in view of United States Patent No. 6,879,308 to Hsieh (hereinafter "Hsieh"). Claim 5 stands rejected under 35 U.S.C. § 103(a) as being unpatenable over Kim, Lee and Little in view of United States Patent No. 6,700,634 to Taniguchi et al. (hereinafter "Taniguchi"). Claim 6 stands rejected under 35 U.S.C. § 103(a) as being unpatenable over Kim, Lee, Little and Taniguchi in view of United States Patent No. 5,280,371 to McCartney et al. (hereinafter "McCartney"). Claim 17 stands rejected under 35 U.S.C. § 103(a) as being unpatenable over Kim, Lee, Little and Weindorf in view of Taniguchi. Claims 18-21 stand rejected under 35 U.S.C. § 103(a) as being unpatenable over Kim, Lee, Little, Weindorf and Taniguchi in view of McCartney. Claims 31-33 stand rejected under 35 U.S.C. § 103(a) as being unpatenable over Kim, Lee, Little and Hsieh in view of Weindorf. As discussed above, the dependent claims are patentable at least per the patentability of the independent base claims from which they depend. However, Applicant submits that many of the dependent claims are also separately patentable.

As a preliminary note, each of the dependent claims is rejected as obvious using at least three references and many of the dependent claims are rejected using four or more references. Applicant respectfully submits that the more references that need to be combined to provide the teachings of a single claim, the less likely it is that one of skill in the art would be motivated to combine the multiple references without using Applicant's disclosure as a road map. For example, Claims 6 and 18 are rejected using five references. Applicant respectfully submits that all of the pending claims are patentable for at least this reason.

Furthermore, Claim 14 recites:

> The liquid crystal display of Claim 13 wherein in the first position, the plates are substantially parallel to the liquid crystal layer, and in the second position, the plates are substantially normal to the liquid crystal layer.

Dependent Claim 34 contains similar recitations. As discussed above, nothing in Little

discloses or suggests a liquid crystal display. Accordingly, it follows that nothing in Little discloses or suggests elements having positions relative to the liquid crystal display. Therefore, Applicant submits that dependent Claims 14 and 34 are separately patentable over the cited references for at least these additional reasons.

Claim 27 recites:

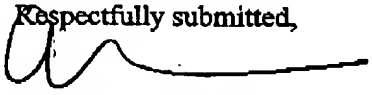
> The device of Claim 26, **wherein the device comprises a mobile terminal**, wherein the liquid crystal display further comprises a plurality of pixels, wherein ones of the plurality of plates correspond to ones of the plurality of pixels, wherein the first mode of operation is a reflective mode of operation and wherein the second mode of operation is a transmissive mode of operation.

The Office Action does not even address the highlighted recitation with respect to a mobile terminal. *See* Office Action, page 11, rejection of Claim 27. Nothing in the cited references discloses or suggests the use of a liquid crystal display in accordance with embodiments of the present invention in a mobile terminal as recited in Claim 27. Accordingly, Applicant submits that Claim 27 is separately patentable over the cited references for at least these additional reasons.

CONCLUSION

Applicant respectfully submits that the pending claims are in condition for allowance for at least the reasons discussed above, which is respectfully requested in due course.

Respectfully submitted,



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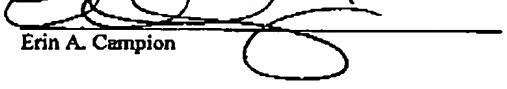

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